**TRAFFIC CONTROL DEVICES FOR FLUSH SHOULDER ROADWAY**

**GENERAL NOTES:**
1. No guardrail is proposed for signals; however, some form of impact attenuation device may be specified for certain locations.
2. Advance flasher to be installed when and if called for in plans or specifications.
3. Top of foundation shall be no higher than 4" above finished shoulder grade.
4. Type of traffic control device
   1. Flashing warning devices with cantilever
   2. Flashing warning devices with cantilever and gate
   3. Flashing warning devices with cantilever and gate
   4. Flashing warning devices with cantilever and gate
   5. Flashing warning devices with gate

**TYPE I**
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices

**TYPE II**
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices
- 2 Quadrant flashing warning devices

**TYPE III AND TYPE V**
- 2-4 Quadrant flashing warning devices
- 2-4 Quadrant flashing warning devices
- 2-4 Quadrant flashing warning devices
- 2-4 Quadrant flashing warning devices
- 2-4 Quadrant flashing warning devices

**TYPE IV AND TYPE VI**
- Gates Are Used.
- Gates Are Used.
- Gates Are Used.
- Gates Are Used.
- Gates Are Used.

**SIGNAL PLACEMENT AT RAILROAD CROSSING**

<table>
<thead>
<tr>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paved Shoulder</td>
<td>8&quot; Max.</td>
</tr>
<tr>
<td>Pavement Edge (Travelway)</td>
<td>8&quot; Max.</td>
</tr>
<tr>
<td>Centerline Of Travelway</td>
<td>8&quot; Max.</td>
</tr>
<tr>
<td>Pavement Edge (Travelway)</td>
<td>8&quot; Max.</td>
</tr>
</tbody>
</table>

**SITE CONDITIONS:**
- Shoulder Paved
- Travelway Paved
- Median
- Paved Shoulder

**FIGURE 1**
- Note:
  - Arrows denote direction of travel not pavement markings.
- Gate Length Requirements See Note 5 Sheet 3.
- When 10' is deemed impractical, the control device can be located as close as 2' from the edge of a paved shoulder but not less than 6" from the edge of the near traffic lane.

**INDEX**

See Index 830-T01

**STANDARD PLANS**

FY 2018-19

**REVISION**

01/01/17

**RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES**

**INDEX**

509-070

**SHEET**

1 of 4
NOTES:
1. The location of flashing warning devices and stop lines shall be established based on future (or present) installation of gate with appropriate track clearances.
2. Where plans call for railroad traffic control devices to be installed in curbed medians, the minimum median width shall be 12'-6".
3. Location of railroad traffic control device is based on the distance available between face of curb & sidewalk. 0 to 6' - Locate device inside sidewalk. Over 6' - Locate device between face of curb and sidewalk.
4. Stop line to be perpendicular to edge of roadway, approx. 19' from nearest rail; or 8' from and parallel to gate when present.
5. When a cantilevered-arm flashing warning device is used, the minimum vertical clearance shall be 12'-6" from above the Crown of Roadway to the lowest point of the Overhead Signal Unit.

TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY

TYPE I

TYPE II

TYPE III

TYPE IV

TYPE V

SIGNAL PLACEMENT AT RAILROAD CROSSING (2 LANES, CURB & GUTTER)

SIGNAL PLACEMENT AT RAILROAD CROSSING (2 LANES, CURB & GUTTER)

TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY
NOTES:

1. When computing pavement message, quantities do not include traverse lines.

2. Placement of sign W10-1 is in a residential or business district, where low speeds are prevalent, the W10-1 sign may be placed a minimum distance of 100' from the crossing. Where street intersections occur between the RR pavement message and the tracks an additional W10-1 sign and additional pavement message should be used.

3. A portion of the pavement markings symbol should be directly opposite the W10-1 sign.

4. Recommended location for FTP-61-06 or FTP-62-06 signs, 100' urban and 300' rural. See Index 700-102 for sign details.

5. Gate Length Requirements:
   - For Two-way undivided sections
     - The gate shall extend to within 1' of the center line. On multiple approaches the maximum gate length may not reach to within 1' of the center line. For those cases, the distance from the gate to the center line shall be a maximum of 4'.
   - For one-way or divided sections
     - The gate shall be of sufficient length such that the distance from the gate tip to the inside edge of pavement is a maximum of 4'.
### RAILROAD GATE ARM LIGHT SPACING

<table>
<thead>
<tr>
<th>Specified Length Of Gate Arm</th>
<th>Dimension &quot;A&quot;</th>
<th>Dimension &quot;B&quot;</th>
<th>Dimension &quot;C&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Ft.</td>
<td>6&quot;</td>
<td>36&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>13 Ft.</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>16-17 Ft.</td>
<td>24&quot;</td>
<td>36&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>18-19 Ft.</td>
<td>29&quot;</td>
<td>41&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>20-23 Ft.</td>
<td>34&quot;</td>
<td>45&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>24-28 Ft.</td>
<td>36&quot;</td>
<td>48&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>29-33 Ft.</td>
<td>36&quot;</td>
<td>48&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>32-34 Ft.</td>
<td>36&quot;</td>
<td>7&quot;</td>
<td>7&quot;</td>
</tr>
<tr>
<td>35-37 Ft.</td>
<td>36&quot;</td>
<td>9&quot;</td>
<td>9&quot;</td>
</tr>
<tr>
<td>38 And Over</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>10&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**


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**MEDIAN SECTION AT SIGNAL GATES**

**MEDIAN SIGNAL GATES FOR MULTILANE UNDIVIDED URBAN SECTIONS**

(THREE OR MORE DRIVING LANES IN ONE DIRECTION, 45 MPH OR LESS)